

Appl. No. 10/810,023
Amdt. Dated July 13, 2007
Reply to Office Action of April 16, 2007

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Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A barrier array for use in a flat panel display, comprising:

a shadow mask including a metal plate and a plurality of openings defined therethrough according to a predetermined pattern, the predetermined pattern being in accordance with a pixel pattern of a flat panel display, the ~~shadow-mask~~metal plate having an upper surface and a lower surface; and

an insulative layer including a first portion directly formed on the upper surface of the ~~shadow-mask~~metal plate, a plurality of second portions, and a third portion directly formed on the lower surface of the ~~shadow-mask~~metal plate, the second portions disposed in the respective openings and connecting the first portion with the third portion.

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Claim 2 (currently amended): The barrier array as described in claim 1, wherein the ~~shadow-mask~~ metal plate is made from a material selected from the group consisting of: an iron-nickel alloy, low carbon steel, and another suitable metal alloy; and the material has a coefficient of thermal expansion matching that of a substrate of the flat panel display.

Claim 3 (original): The barrier array as described in claim 1, wherein the insulative layer comprises alumina or magnesia.

Claim 4 (original): The barrier array as described in claim 3, wherein a thickness of the insulative layer is in the range from 10 to 500 micrometers.

Claim 5 (original): The barrier array as described in claim 3, wherein a thickness of the insulative layer is in the range from 75 to 200 micrometers.

Claim 6-17 (cancelled):

Claim 18 (currently amended): A barrier array for use in a flat panel display, consisting essentially of:

a metal plate including a plurality of openings therethrough according to a pixel pattern of a flat panel display, the metal plate having an upper surface and a lower surface opposite to the upper surface; and

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an insulative layer including a first portion directly formed on the upper surface of the metal plate and a plurality of second portions, the second portions extending from the first portion into the respective openings and directly formed on inner edges of the metal plate that bound the respective openings.

Claim 19 (canceled)

Claim 20 (previously presented): The barrier array as described in claim 18, wherein the insulative layer includes a third portion formed on the lower surface of the metal plate.

Claim 21 (canceled)

Claim 22 (previously presented): The barrier array as described in claim 18, wherein a thickness of the insulative layer is in the range from 10 to 500 micrometers.